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International Assessment of DSM-5 and ICD-11 Personality Disorder Traits: Toward a Common Nosology in DSM-5.1

Short Title: International Assessment of ICD-11 and DSM-5 Traits

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Bo Bach[1]*, André Kerber[2], Anton Aluja[3], Tim Bastiaens[4], Jared W. Keeley[5], Laurance Claes[6], Andrea Fossati[7], Fernando Gutierrez[8], Sérgio E. S. Oliveira[9], Rute Pires[10], Karel D. Riegel[11], Jean-Pierre Rolland[12], Isabelle Roskam[13], Martin Sellbom[14], Antonella Somma[7], Lucas Spanemberg[15], Włodzimierz Strus[16], Jens Thimm[17], Aidan G. C. Wright[18], Johannes Zimmermann[19]

[1]Center for Personality Disorder Research, Psychiatric Research Unit, Region Zealand, Slagelse, Denmark
[2]Department of Psychology, Freie Universität, Berlin, Germany
[3]Lleida Institute for Biomedical Research, University of Lleida, Catalonia (Spain)
[4]University Psychiatric Centre, Katholieke Universiteit, Leuven, Belgium
[5]Psychology Department, Virginia Commonwealth University, U.S.
[6]Faculty of Medicine and Health Sciences, University Antwerp, Belgium and Faculty of Psychology and Educational Sciences, Katholieke Universiteit, Leuven, Belgium
[7]Faculty of Psychology, Vita-Salute San Raffaele University, Milan, Italy
[8]Hospital Clinic de Barcelona, Barcelona, Spain
[9]Institute of Psychology, University of Brasília (UnB), Brasília, Brazil
[10]CICPSI, Faculdade de Psicologia, Universidade de Lisboa, Lisbon, Portugal
[11]Department of Addictology, 1st Faculty of Medicine, Charles University of Prague, General University Hospital of Prague, Prague, Czech Republic
[12]Psychology Department, University Paris Nanterre, Paris, France
[13]Psychological Sciences Research Institute, Université catholique de Louvain (UCLouvain), Louvain-la-Neuve, Belgium
[14]Department of Psychology, University of Otago, Dunedin, New Zealand
[15]Escola de Medicina, Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, Brazil
[16]Institute of Psychology, Cardinal Stefan Wyszyński University, Warsaw, Poland
[17]Department of Psychology, UiT, The Arctic University of Norway, Tromsoe, Norway
[18]Department of Psychology, University of Pittsburgh, U.S.
[19]Department of Psychology, University of Kassel, Kassel, Germany

***Corresponding Author**
Bo Bach, PhD
Center for Personality Disorder Research (CPDR)
Psychiatric Research Unit, Region Zealand
Psychiatric Hospital Slagelse
Faelledvej 6, Building 3, 4th floor
4200 Slagelse, Denmark
Tel: +45 30 29 33 81
E-mail: bobachsayad@gmail.com

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Abstract

Introduction: The DSM-5 Alternative Model of Personality Disorders (AMPD) and the ICD-11 Classification of Personality Disorders (PD) are largely commensurate, and when combined, they delineate six trait domains: Negative Affectivity, Detachment, Antagonism/Dissociality, Disinhibition, Anankastia, and Psychoticism. **Objective**: The present study evaluated the international validity of a brief 36-item patient-report measure that portrays all six domains simultaneously including 18 primary subfacets. **Methods**: We developed and employed a modified version of the Personality Inventory for DSM-5 – Brief Form Plus (PID5BF+). A total number of 16,327 individuals were included, of which 2,347 were patients. The expected 6-factor structure of facets was initially investigated in samples from Denmark (n = 584), Germany (n = 1,271), and the U.S. (n = 605), and was subsequently replicated in both patient- and community samples from Italy, France, Switzerland, Belgium, Norway, Portugal, Spain, Poland, Czech Republic, U.S., and Brazil. Associations with interview-rated DSM-5 PD categories were also investigated. **Results**: Findings generally supported the empirical soundness and international robustness of the six domains including meaningful associations with familiar interview-rated PD types. **Conclusions**: The modified PID5BF+ may be employed internationally by clinicians and researchers for brief and reliable assessment of the six combined DSM-5 and ICD-11 domains, including 18 primary subfacets. This six-domain framework may inform a future nosology for DSM-5.1 that is more reasonably aligned with the authoritative ICD-11 codes than the current DSM-5 AMPD model. The 36-item modified PID5BF+ scoring key is provided in supplemental Appendix A.

Introduction

More than one out of ten individuals in Western societies [1] and at least half of psychiatric outpatients [2] meet the diagnostic requirements for a personality disorder (PD), which is a central predictor of psychosocial impairment, comorbidity, and treatment outcome [3]. However, scientific and clinical attention to PDs vary from country to country due to culture, zeitgeist, and politics[1] [4]. In many countries, PDs are rarely being diagnosed or described at all, apparently because practitioners find it too complicated and cumbersome to assess [5]. For such reasons, it seems imperative to introduce an internationally robust and feasible assessment framework that delineates the phenotypic variation in the expression of PDs according to upcoming empirical nosology

In both the ICD-11 Classification of Personality Disorders and the DSM-5 Alternative Model of Personality Disorders (AMPD) in Section III, trait domains are used as specifiers that contribute to the individual expression of personality disturbance in addition to the overall classification of severity (e.g., Mild, Moderate, and Severe) [6,7]. Such specifiers are not diagnostic entities per se, but they may inform clinical management of those patients who have been diagnosed with a personality disorder or personality difficulty, including how to establish a therapeutic alliance and decide target of intervention [8]. Both ICD-11 and DSM-5 AMPD describe trait domains of Negative Affectivity, Detachment, Antagonism/Dissociality, and Disinhibition. In addition, the DSM-5 AMPD also includes a separate domain of Psychoticism, whereas the ICD-11 includes a separate domain of Anankastia.

In the present paper, we perceive three potential shortcomings of the DSM-5 AMPD and ICD-11 trait models[2], respectively: *First*, the ICD-11 PD classification remains consistent with the ICD-10 tradition where Schizotypy is understood as a variant of schizophrenia rather than a PD. For that reason, a domain of Psychoticism is not included in the ICD-11 model. Nevertheless, a growing body of research and clinical knowledge suggest that trait features of Schizotypy and Psychoticism (e.g., oddity, thought disorder, and schizophrenia-proneness) should not be ignored [9,10]. *Second*, the ICD-11 trait domain of Anankastia corresponds to the Compulsivity trait domain, which was originally proposed as a separate domain for the DSM-5 trait model [11]. Ultimately this domain was omitted in the DSM-5 AMPD in favor of parsimony [12]. The DSM-5 AMPD defines features of Anankastia/Compulsivity (e.g., rigid perfectionism) in terms of low Disinhibition, which is somewhat supported by empirical evidence [13,14]. *Third*, another difference between the DSM-5 AMPD trait model and the ICD-11 trait model is that the latter does not include any specific facets within the broader domains (e.g., grandiosity, deceitfulness, and manipulativeness within the domain of Antagonism). Taken together, we propose that the aforementioned three potential shortcomings might be addressed using a combined assessment framework that operationalizes all six domains (including separate domains of Psychoticism and Anankastia) along with three primary facet-level features for each domain. Such a common six-factor framework might be worthwhile to consider in the progress toward DSM-5.1.

A feasible approach to measuring ICD-11 and DSM-5 trait domains and facets

Initially, the 220-item Personality Inventory for DSM-5 (PID-5) was constructed to operationalize the DSM-5 AMPD trait model [12]. So far, several forms and scales have been developed from this PID-5 item-pool, including abbreviated forms [15,16] and an algorithm for capturing five ICD-11 trait domains [17,18] with 16 DSM-5 trait facets. Most recently an algorithm was developed for the assessment of the combined DSM-5 AMPD and ICD-11 trait model by means of six distinct domains (i.e., Negative Affectivity, Detachment, Antagonism, Disinhibition, Anankastia, and Psychoticism),

[1] For example, so-called "dangerous" personality disorders have received much attention in the U.K. due to a political and public awareness of their potential risk to others [59], whereas in Norway, avoidant personality disorders have been extensively described and investigated for years due to their perceived importance in this particular region [60].

[2] The present study only focused on the trait domain qualifiers. An optional borderline pattern qualifier was included in the ICD-11 to enhance clinical utility in terms of continuity with the well-established treatment guidelines for this disorder, and it may optionally be used after first having specified prominent trait qualifiers.

including 17 lower-order facets with a total of 34 items: The Personality Inventory for DSM-5 – Brief Form Plus (PID5BF+) [19]. In the present study we developed and employed a modified 36-item version of the PID5BF+, which is further described in the method section.

Goal of the present study

The present study sought to investigate and replicate the proposed six-factor model of the combined ICD-11 and DSM-5 trait domains using a modified version of the PID5BF+ algorithm on international PID-5 data. Additionally, we aimed to investigate the associations between the six trait domains and the ten familiar DSM-5 PDs in order to determine continuity between traditional PD types and the combined DSM-5/ICD-11 traits. We expected the pattern of associations to be consistent with previous research on these domains in relation to familiar PD types [20,21].

Materials and Methods

Instruments

In the current study we employed a modified version of the *Personality Inventory for DSM-5 Brief Form Plus* (PID5BF+) [19], which comprises 36 items that were used to measure 6 domains by means of 18 facets.

The original PID5BF+ is a 34-item self-report form developed from the original PID-5 item pool to delineate the combined DSM-5 and ICD-11 trait features within six domains (i.e., Negative Affectivity, Detachment, Antagonism, Disinhibition, Anankastia, and Psychoticism). The selection of the 34 PID5BF+ items was done by Kerber et al. [19] using ant colony optimization algorithms, which is a computational method that has been proven to be very effective for item selection tasks. For further details about the construction of the PID5BF+ we refer to Kerber et al. [19]. This original PID5BF+ consists of 34 items, which operationalize the six domains by means of 17 primary facets that are largely supported by meta-analytic findings in terms of high expected loadings and low unexpected loadings across the higher-order domains [13]. The PID5BF+ operationalizes the domain of Anankastia as a separate domain by the facets of Rigid Perfectionism (i.e., low Disinhibition) and Perseveration (i.e., Negative Affectivity), which is based on an empirically derived cross-walk between DSM-5 AMPD and ICD-11 trait domains [21,22].

In order to further adapt the PID5BF+ to efficiently capture the primary facets represented in the ICD-11 domain of Anankastia, we modified its operationalization by extracting subfacets of orderliness, rigidity, and perfectionism from the composite facet of rigid perfectionism. The extraction of these three Anankastia facets is consistent with the initial 37-facet version of the DSM-5 trait model [12]. Accordingly, orderliness, rigidity, and perfectionism were initially distinct facets, which were subsequently collapsed into one composite facet of rigid perfectionism due to considerable inter-correlations [12]. For the perfectionism facet, we used two items that were already selected for the PID5BF+ operationalization of rigid perfectionism (item 123 and item 176). For the rigidity facet, we used the only two items from the complete PID-5 item pool that covered this feature (item 140 and item 220). For the orderliness facet, we included two out of four possible items from the PID-5 item pool (item 34 and item 115), which were selected based on their empirical item-characteristics (i.e., item-scale correlations and internal consistency). Moreover, in this modified version of PID5BF+ we omitted perseveration (2 items) as a primary feature of Anankastia because this facet was originally intended to capture features of Negative Affectivity as reflected by its expected loadings on the Negative Affectivity domain [13]. The other 30 items from the original PID5BF+ representing the five DSM-5 trait domains remained unchanged. The modified PID5BF+ scoring key is included in supplemental Appendix A.

Taken together, the present study used a modified PID5BF+ to operationalize the DSM-5 and ICD-11 trait domains using three primary facets per domain (see Table 2), so that all domains are represented by an equal (and comparable) number of trait indicators. The complete modified PID5BF+ comprises 36 items, which delineate 18 facets (2 items per facet). The six domain scores are

estimated using average scores for each domain's three primary facets. All the analysed PID5BF+ data in the present study were derived from international samples, where the original 220-item PID-5 [12] had been administered.

We employed the *Structured Clinical Interview for DSM-IV – Axis II* (SCID-II) [23] as a diagnostic interview for personality disorders in a clinical subsample (n = 142), which was derived from the Danish patient sample (See details in [22]).

Samples and Procedures

In the present international collaborative study we included a total of 16 samples from different countries, regions, and populations [17,19,25–37]. In order to ensure heterogeneity and evade range restriction, we deliberatively incorporated diverse samples including clinical, community, student, and mixed samples. Thus, all data have already been analyzed, described, and published elsewhere using complete 220-item PID-5 data (see references in Table 1).

To ensure valid data, we systematically employed the PID-5 Response Inconsistency Scale (PID-5-RIS) for all samples to detect and exclude cases with random responding. The PID-5-RIS was developed by Keeley et al. [38] and subsequently validated in different studies [35,39,40]. We consistently excluded cases with a PID-5-RIS score of 17 or above, which is supported by the aforementioned findings. As presented and characterized in Table 1, the present study included three derivation samples (Appendices 1 to 3) followed by thirteen replication samples (Appendices 4 to 13). For detailed sample and scale characteristics as well as data collection procedures for each sample, please consult the respective reference and the supplemental appendix.

Statistical approach

To test whether we could identify and replicate an empirically sound six-factor structure of the combined ICD-11 and DSM-5 primary trait facets, we subjected a polychoric correlation matrix of the 18 facet scores of the modified PID5BF+ to an exploratory structural equation modeling (ESEM) analysis in Mplus 7.3 with robust maximum likelihood (MLR) estimation and the default GEOMIN rotation [41]. Model fit was evaluated using root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker–Lewis index (TLI), and standardized root mean squared residual (SRMR). We relied on the CFI (above 0.95) and the RMSEA (below 0.06) as indicators of adequate model fit [42].

Results

Derivation and Replication of Six-Factor Structure

As presented in Table 1, model fit indices were good for the six-factor structure across the three derivation samples (i.e., Denmark, Germany, U.S.) in terms of CFI above 0.95 and RMSEA below 0.06. As presented in Table 2, the six-factor model showed expected patterns for all six factors in terms of loadings above .40. Only the facets of distractibility (Denmark) and perceptual dysregulation (U.S.) showed loadings slightly below .40.

As shown in Table 1, the 13 international replication samples also showed good model fit indices in terms of CFI above 0.95 and RMSEA below 0.06. As presented in the supplemental Appendices 4-13, each replication sample overall showed expected factorial patterns, with only few deviations that particularly applied to the facets of distractibility and irresponsibility. Accordingly, in both the Czech sample [31], the U.S. mixed sample [27], and the U.S. student sample [28], distractibility cross-loaded on Negative Affectivity and Psychoticism. Likewise, in the French community sample [34], the Swiss community sample [34], the Portuguese community sample [25], and the Spanish mixed sample [26], irresponsibility primarily loaded negatively on Anankastia rather than Disinhibition. Moreover, in the Brazilian mixed sample [30], impulsivity cross-loaded on Negative Affectivity whereas in the Swiss sample, impulsivity cross-loaded on Antagonism. Finally, in the Swiss sample, grandiosity cross-loaded on Negative Affectivity.

As shown in Table 2 (and Appendices 4-13), the latent factor correlations generally indicated appropriate discriminant validity. Some differences did occur across samples in the strength and pattern of correlation coefficients among trait domains[3].

Association with Interview-Rated Personality Disorders

The associations of interview-rated PDs with DSM-5 and ICD-11 trait domains were overall consistent with meta-analytic findings on the DSM-5 Section III [20] as well as research on the ICD-11 trait domains [21]. Paranoid PD was predominantly related to Negative Affectivity, Psychoticism, Antagonism, and Detachment, in that order. Schizoid PD was related to Detachment and secondarily to Antagonism and lack of Negative Affectivity. Schizotypal PD was related to Psychoticism and secondarily to Antagonism and Detachment. Antisocial PD was related to Antagonism, low Negative Affectivity, and Disinhibition. Borderline PD was related to Negative Affectivity, Disinhibition, and Psychoticism. Histrionic PD was related to Antagonism, Disinhibition, and Negative Affectivity. Narcissistic PD was related to Antagonism and secondarily to Psychoticism and Disinhibition. Avoidant PD was related to Negative Affectivity and Detachment, and secondarily to Anankastia. Dependent PD was related to Negative Affectivity and Disinhibition. Finally, Obsessive-Compulsive PD was related to Anankastia and secondarily to Negative Affectivity and Psychoticism.

In order to inspect the difference between the original PID5BF+ algorithm and the modified PID5BF+ algorithm, we compared their correlations with PD criterion-counts. First, we found the modified PID5BF+ Anankastia domain to be more strongly correlated with Obsessive-Compulsive PD (r = .66) relative to the original PID5BF+ Anankastia domain (r = .48). Moreover, the original PID5BF+ Anankastia domain showed a stronger mean correlation with other PDs (r_m = .18) relative to the modified PID5BF+ Anankastia domain (r_m =.14). These patterns suggest that the modified PID5BF+ has better sensitivity and specificity for Obsessive-Compulsive PD relative to the original PID5BF+. However, both operationalizations of Anankastia seem useful for the purpose of capturing features of compulsivity. In any case, when correlating the original PID5BF+ Anankastia score with the modified PID5BF+ Anankastia score, using the mixed German sample, we found the two domain scores to be substantially overlapping (r = .80).

Discussion

In the present study we investigated and replicated a six-factor model of the combined ICD-11 and DSM-5 trait domains (i.e., Negative Affectivity, Detachment, Antagonism, Disinhibition, Anankastia, and Psychoticism) across international samples, using a modified version of the PID5BF+ (36 items). We also found that the six modified PID5BF+ domains overall showed good discriminant validity and meaningful continuity with familiar interview-rated PDs, consistent with previous findings on the PID-5 [20,21]. Notably, this six-domain structure of personality traits aligns with the six-domain trait model originally proposed for DSM-5 [11]. In general, the 18 modified PID5BF+ facets showed expected loadings with good model fits across different countries and populations. The most evident deviating pattern applied to irresponsibility (negative cross-loading on Anankastia) and distractibility (cross-loadings on Negative Affectivity and Psychoticism), which is consistent with PID-5 research on ICD-11 traits [17] and DSM-5 traits [13], respectively. In the following, our findings will be further discussed in relation to the path going forward for ICD-11 and DSM-5.1.

A Feasible Facet-Level Portrait of ICD-11 Trait Qualifiers

In contrast to the more parsimonious ICD-11 trait domain model, the DSM-5 AMPD trait system allows clinicians to specify 25 trait facets. According to the ICD-11 Working Group for the Revision of Personality Disorders, such facet-level information was thought to add unnecessary complexity to the classification [43,44]. Nevertheless, reference to potential facet-level features is included within

[3]Associations between Disinhibition and Negative Affectivity differed between cultures with Spain having the strongest (.41) and France having the lowest (.20). Additionally, associations of Psychoticism with Disinhibition and Psychoticism with Anankastia differed between samples.

the description of the five ICD-11 domains, but there is no coding for specific facets [7]. Even though ICD-11 trait qualifiers are only coded at the domain-level, which seems most feasible for most WHO member countries, more specialized practitioners often desire a number of facet descriptors to guide their conceptualization and treatment planning [45]. The present study shows that primary features of each ICD-11 trait domain may be reliably and validly portrayed using specific DSM-5 trait facets, which also works across different countries and languages. In cases where practitioners or researchers would only want a profile of the five established ICD-11 trait domain qualifiers, the six items comprising the Psychoticism domain may be omitted, which would yield a reduced 30-item version.

Would DSM-5 benefit from a separate domain of Compulsivity/Anankastia?

The DSM-5 trait system describes features of Anankastia/Compulsivity in terms of a low score on Disinhibition (i.e., rigid perfectionism). However, when looking at the latent factor correlations reported in Table 2 (and Appendices 4-13), there are no substantial negative correlations between Disinhibition and Anankastia, which somewhat speaks against using the low end of Disinhibition as measure of Anankastia as suggested in the DSM-5 proposal [11,12]. This is consistent with previous research supporting a distinct and psychometrically sound domain of Anankastia [17,46]. Most importantly, it might not be straightforward or clinically meaningful for practitioners to specify a code for "low Disinhibtion" or "lack of Disinhibition" in order to highlight this trait feature, and lack of something does not necessarily mean presence of something else. In fact, it is not uncommon that a rather complex PD is characterized by both Compulsivity and Disinhibition [47], which therefore requires that these two features can be specified simultaneously using two separate codes. Also, when employed for research and screening purposes, it would not be possible to measure these two features at the same time if each were only represented by polar opposites within one single dimension (i.e., Disinhibition versus Compulsivity dimension). Moreover, experts on Compulsivity have called for a more multi-dimensional profile of Anankastia in response to the current DSM-5 AMPD model in which Compulsivity/Anankastia is only represented by the facet of rigid perfectionism (low Disinhibition) along with a secondary facet of perseveration (Negative Affectivity) [48,49]. Thus, we suggest that a future DSM-5.1 should include a separate domain of Anankastia/Compulsivity just as in the original PD proposal for DSM-5 [11]. We also endorse the inclusion of multiple facets of Anankastia/Compulsivity (e.g., perfectionism, orderliness, and rigidity), which can be represented by two items per facet as demonstrated in the present study.

Issues related to the domain of Psychoticism and psychotic-like features

In the initial DSM-5 proposal, the Psychoticism domain was labelled "schizotypy" including facets of unusual perceptions, unusual beliefs, eccentricity, cognitive dysregulation, and dissociation-proneness [11]. For empirical reasons, these facets were eventually collapsed into unusual beliefs & experiences, eccentricity, and cognitive & perceptual dysregulation within the higher-order domain of Psychoticism [12], as operationalized in the present study. This maladaptive domain can be said to refer to a dimension[4] ranging from normal dissociative, imaginative, and unconventional features to more extreme schizophrenia-like features (e.g., "Sometimes I can influence other people just by sending my thoughts to them"). On this continuum, the DSM-5 captures features of schizotypy that are closer to the "normal" end, characterized by eccentric appearance or some cognitive disorganization [50]. Thus, the DSM-5 definition of Psychoticism can be said to refer to a normal variation of schizophrenia-liability including features of dissociation-proneness. Importantly, this schizotypal-oriented definition of Psychoticism should not be equated with Eysenck's broader concept of Psychoticism characterized by features such as aggressiveness, impulsivity, and creativity, which he believed, were linked to vulnerability to psychosis [51]. In other words, Eysenck's concept of Psychoticism is more related to Disinhibition and Antagonism, whereas his trait of creativity may

[4] From the perspective of "polar opposites" the healthy end of this dimension may be conceptualized as "lucidity" [45].

be somewhat related to Psychoticism or Schizotypy in terms of unconventionality [52]. Nevertheless, consistent with Eysenck's model, the majority of PID-5 research on Psychoticism has shown substantial associations between Psychoticism and Disinhibition [13]. Likewise, the strongest inter-factor correlations in the present study applied to these two domains (see Table 2). Finally, the DSM-5 AMPD operationalization of Psychoticism partially captures features of Borderline PD in terms of cognitive & perceptual dysregulation, which includes features of dissociation-proneness [21,53,54].

In contrast to the DSM-5 approach (Section II and III), the ICD-11 PD classification does not provide any code for Schizotypy or Psychoticism because such features are coded within Schizophrenia and other primary psychotic disorders. However, many clinicians and researchers may stay loyal to the more familiar DSM-5 schizotypal personality features including the growing body of research. Yet, the ICD-11 classification of PD severity may rely on whether the patient experiences "dissociative states or psychotic-like beliefs or perceptions" and/or is "highly eccentric", which may resemble certain features of Schizotypy or Psychoticism. Accordingly, the ICD-11 approach is somewhat consistent with the traditional structural approach to classification of personality organization (e.g., neurotic, borderline, and psychotic levels), in which the lowest and most severe borderline levels may involve transient psychotic states [55]. In other words, the ICD-11 approach can be said to conceptualize and classify the capacity for reality testing (i.e., "accuracy of situational and interpersonal appraisals") according to level of PD severity, and not as a distinct trait domain [22].

Notably, the ICD-11 severity-related features of psychotic-like perceptions must be associated with *situations of high affective arousal*, which does not necessarily apply to the DSM-5 trait domain of Psychoticism. For example, a person characterized by DSM-5 Psychoticism may be able to live a satisfactory life with low distress despite eccentricity and somewhat odd beliefs. In contrast, a person characterized by ICD-11 Severe PD with *psychotic-like experiences in situations of high affective arousal* may be viewed as having a highly vulnerable inner structure with strongly immature defense mechanisms when placed in unstructured situations or being under pressure [56]. Thus, the ICD-11 classification of PD severity according to "reality testing" may not simply be exchanged with the trait of Psychoticism, and vice versa.

We therefore propose that a future harmonization between ICD-11 and DSM-5.1 covers both the ICD-11 trait domains along with the current DSM-5 AMPD domain of Psychoticism, which is consistent with the six-domain model supported in the present study.

Towards a New Personality Disorder Trait Model in DSM-5.1

It is important to underscore that the ICD-11 classification of PDs is not just an "international" alternative to the American DSM-5, because at the end of the day, the ICD-11 is the only authoritative nomenclature, even in countries such as the U.S., Australia, and U.K. Thus, even the many practitioners who swear allegiance to the DSM-5 must eventually use the ICD-11 for coding purposes (e.g., national statistics, legal decisions, and health insurance). For this particular purpose, it seems reasonable that the DSM-5 framework as much as possible aligns with the ICD-11. Unless the American Psychiatric Association (APA) choses to forgo publishing another edition of the DSM and instead adopt the WHO's ICD-11 (which could be an ideal solution),[5] we believe that a future DSM-5.1 revision might be substantially improved by further alignment with the authoritative ICD-11 in terms of including the same trait domain qualifiers, which is empirically supported in the present study across different countries and populations.

Limitations and Future Directions

The findings of the present study should be considered in the light of certain limitations and future directions. First, because the modified PID5BF+ data (36 items) used in the present study was

[5] One official and freely accessible classification of mental disorders seems most appropriate and feasible for global mental health care, including WHO member countries that have local or independent classification systems (e.g., U.S. and Japan).

extracted from complete 220-item PID-5 data, we suggest that future research conduct independent evaluations of the 36-item modified PID5BF+ without using the algorithm for the complete 220-item original PID-5. Second, the present study primarily included samples from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies, and we therefore encourage future research to include samples from Non-WEIRD countries in order to further generalize the global replicability [57]. Third, it was beyond the scope of the present study to employ more stringent tests of factor congruence and measurement invariance across countries, languages, gender, age groups, and clinical status, and we therefore encourage future research to pursue this aim. Fourth, future research should investigate convergence with another measure of ICD-11 traits such as the Personality Inventory for ICD-11 (PiCD) [58]. Finally, future research should aim to establish norm values from representative samples to guide interpretation of individual PID5BF+ test scores.

Acknowledgement

The present paper is dedicated to Professor of Clinical Psychiatry, Erik Simonsen, MD, in celebration of his 70th birthday this year. As co-founder of the International Society for the Study of Personality Disorders (ISSPD), Professor Simonsen spent much of his career paving the way for international dialogue within this field. For more than 30 years ago, he invited prominent scholars and clinicians from around the world to the first ISSPD congress in Copenhagen. Professor Simonsen (in collaboration with Thomas A. Widiger) was later entrusted by the NIMH, WHO, and APA to take the lead in preparing the grounds for a reclassification of personality disorders. He also founded the World Psychiatric Association (WPA) Section on Personality Disorders and chaired the WPA/ISSPD Educational Program on Personality Disorders. In the spirit of Professor Simonsen's efforts for international dialogue and collaboration, the present work gathered contemporary personality disorder researchers from around the world in order to establish the international validity of a feasible and empirically robust measure of personality disorder traits that harmonizes and integrates the ICD-11 and the DSM-5 nosologies.

Statement of Ethics

This research was conducted ethically in accordance with the World Medical Association Declaration of Helsinki. Subjects have given their informed consent and ethical approval was not required due to the nature of this study.

Disclosure Statement

The authors have no conflict of interest to declare.

Author Contributions

B.B. drafted the manuscript and initiated data analyses in collaboration with J.Z., A.K., A.F., and A.S., whereas A.A., T.B., L.C., F.G., S.O., R.P., K.R., J.R., I.R., M.S., A.S., L.S., W.S., J.T., J. K., and A.W. provided data and critically reviewed/revised the complete manuscript.

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Table 1. Model fit indices for ESEM six-factor structure across international samples

Appendix	Derivation samples	Reference for further details	*N*	Clinical	Chi² (df)	RMSEA	CFI	TLI	SRMR
1	Denmark (clinical)	Bach et al. [16]	584	584	104.807 (60)*	0.036	0.982	0.955	0.017
2	Germany (mixed)	Kerber et al. [18]	1,271	684	174.549 (60)*	0.039	0.982	0.955	0.013
3	U.S. (students)	Anderson et al. [36]	605	-	97.254 (60)*	0.032	0.986	0.964	0.015
	Replication samples (see appendix material)								
4	Brazil (mixed)	Lugo et al. [24]	1,281	103	119.593 (60)*	0.028	0.990	0.976	0.012
5	Czech Republic (mixed)	Riegel et al. [25]	466	125	98.277 (60)*	0.037	0.984	0.960	0.017
6	Belgium (Dutch-speaking; mixed)	Bastiaens et al. [26,27]	712	234	150.962 (60)*	0.046	0.975	0.935	0.018
7	Belgium (French-speaking community)	Roskam et al. [28]	1,529	-	118.228 (60)*	0.025	0.991	0.976	0.012
7	Switzerland (French-speaking community)	Roskam et al. [28]	494	-	83.936 (60)*	0.028	0.986	0.965	0.017
7	France (community)	Roskam et al. [28]	371	-	87.461 (60)*	0.035	0.977	0.941	0.019
8	Italy (community)	Somma et al. [29]	1,965	-	191.745 (60)*	0.033	0.985	0.961	0.013
9	Norway (students)	Thimm et al. [30]	495	-	124.425 (60)*	0.047	0.970	0.923	0.018
10	Poland (mixed)	Rowiński et al. [31]	1,088	117	149.659 (60)*	0.037	0.978	0.944	0.016
11	Portugal (community)	Pires et al. [32]	1,185	-	136.217 (60)*	0.033	0.983	0.957	0.014
12	Spain (mixed)	Gutiérrez et al. [33]	1,431	420	91.741 (60)*	0.019	0.995	0.986	0.011
13	U.S. (mixed)	Keeley et al. [34]	1,024	80	156,591 (60)*	0.040	0.983	0.956	0.014
13	U.S. (students)	Wright et al. [35]	1,826	-	284.660 (60)*	0.045	0.975	0.937	0.017

Note. Chi² marked with asterisks are significant at the 0.05 level; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Square Residual; clinical = clinical participants; community = community-dwelling participants; mixed = both clinical and community; student = university or college students.

Table 2. Six-Factor Loading Patterns for Danish, U.S., and German samples

	Negative Affectivity			Detachment			Antagonism			Disinhibition			Anankastia			Psychoticism		
	DK	**US**	**GM**	**DK**	**US**	**GM**	**DK**	**US**	**GM**	**DK**	**US**	**GM**	**DK**	**US**	**GM**	**DK**	**US**	**GM**
Emotional lability	**.54**	**.62**	**.47**	-.09	-.02	-.08	-.01	-.06	-.05	.11	.04	.23	.11	.07	.10	.02	.19	.08
Anxiousness	**.53**	**.54**	**.64**	.23	.22	.18	-.03	-.04	-.04	-.05	.02	.10	.10	.13	.11	.04	.00	-.01
Separation Insecurity	**.48**	**.59**	**.69**	-.05	-.02	-.01	.04	.13	.04	.20	.13	.07	.00	.02	.00	.07	-.05	.08
Withdrawal	.03	.04	.02	**.85**	**.68**	**.70**	-.05	-.03	-.05	.01	-.03	.08	.06	.10	.10	.00	.11	.10
Anhedonia	.20	.12	.24	**.48**	**.59**	**.63**	.05	.15	.04	.00	-.03	.11	-.11	-.08	-.07	.07	.02	-.01
Intimacy Avoidance	-.16	-.15	-.07	**.50**	**.46**	**.60**	.10	-.04	.02	.06	.23	.06	.04	.08	.05	.08	.05	.08
Manipulativeness	-.16	-.05	-.02	.05	.04	.06	**.60**	**.73**	**.77**	.15	.02	-.01	.02	.02	-.02	.16	.18	.05
Deceitfulness	.04	.05	.01	-.04	.02	-.06	**.86**	**.68**	**.73**	.07	.26	.13	.02	.03	.05	.01	.00	-.01
Grandiosity	.07	.10	.02	.02	.01	-.02	**.51**	**.48**	**.44**	.09	-.05	-.01	.07	.15	.10	.12	.09	.26
Irresponsibility	.04	.03	.02	.03	.22	.06	.17	.20	.23	**.45**	**.44**	**.47**	-.03	-.10	-.15	.11	.05	.06
Impulsivity	.03	.03	.11	.01	-.10	.02	.08	.13	.08	**.74**	**.55**	**.50**	-.02	-.03	-.05	-.03	.16	.11
Distractibility	.17	.24	.12	.00	-.02	.12	-.08	-.07	-.04	**.38**	**.47**	**.58**	.01	.01	.06	.22	.08	.03
Perfectionism	.06	.11	.20	.01	.03	.02	.00	.00	.01	.03	.01	-.02	**.78**	**.77**	**.66**	.01	.06	.10
Rigidity	.03	.03	-.02	.08	.06	.06	.05	.13	.02	.01	-.12	.07	**.65**	**.72**	**.76**	.08	.03	.07
Orderliness	.15	.07	.07	.03	.04	.03	.07	-.01	.05	-.11	.05	-.08	**.63**	**.70**	**.71**	.09	.03	.03
Unusual Beliefs	.03	.06	.07	.00	.02	.02	.06	.11	.03	.01	.00	.02	.01	-.02	-.02	**.82**	**.75**	**.81**
Eccentricity	.07	-.03	.03	.12	.19	.21	.10	-.05	.09	.15	.22	.15	.14	.06	.13	**.46**	**.53**	**.50**
Perceptual Dysreg.	.06	.07	-.04	.05	-.03	.02	.01	.12	.02	.12	.18	.21	.06	.09	.12	**.43**	**.39**	**.49**
Latent domain correlations																		
Negative affectivity	-	-	-															
Detachment	**.11**	**.13**	**.21**	**-**	-	-												
Antagonism	-.02	**.11**	.02	.07	**.11**	.03	-	-	-									
Disinhibition	**.26**	**.25**	**.39**	.06	**.16**	**.32**	**.35**	**.28**	**.23**	**-**	-	-						
Anankastia	**.27**	**.25**	**.24**	**.14**	**.16**	**.16**	**.13**	**.12**	**.08**	-.01	-.04	.02	-	-	-			
Psychoticism	**.23**	**.20**	**.19**	**.20**	**.24**	**.24**	**.31**	**.29**	**.26**	**.35**	**.39**	**.36**	**.23**	**.18**	**.28**	-	-	-

Note. Danish clinical sample (n = 584), U.S. student sample (n = 605), German mixed sample (n = 1271). DK = Denmark; US = United States; GM = Germany.
Expected primary loadings are boldfaced. The matrix at the bottom shows factor correlations, where bolded coefficients are significant at the 0.05 level.

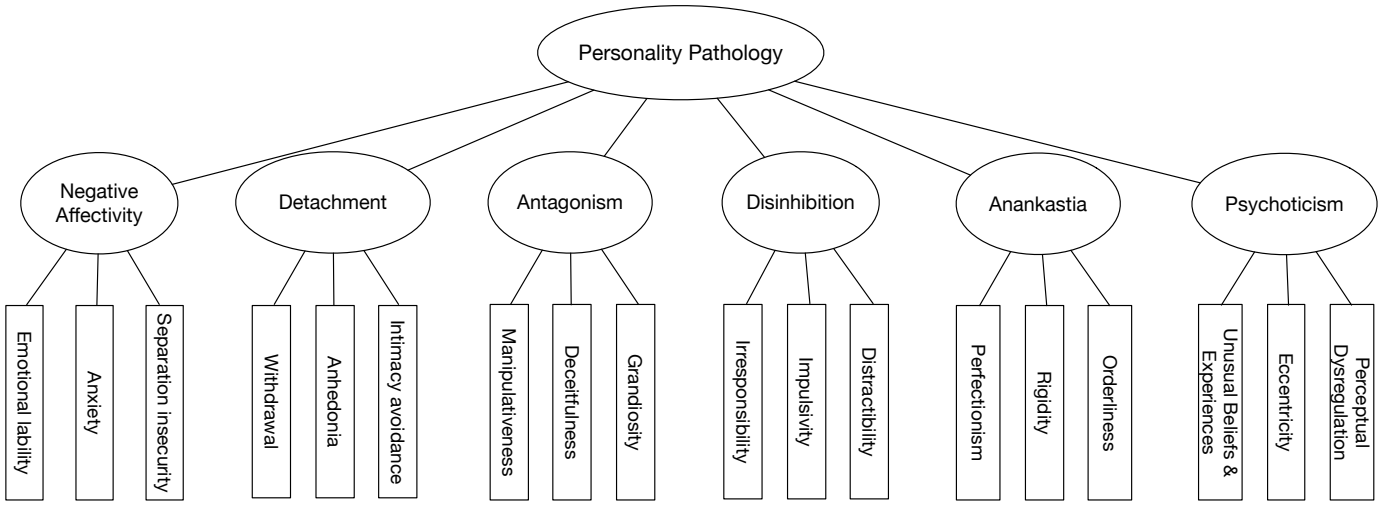
Table 3. Association with Interview-Rated DSM-5 Personality Disorder Criterion Counts

	Modified PID5BF+ ICD-11 and DSM-5 Trait Domains					
	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychoticism
Paranoid	0.37	0.29	0.33	0.23	0.21	0.36
Schizoid	-0.18	0.28	0.22	0.06	0.05	0.14
Schizotypal	0.11	0.19	0.24	0.19	0.15	0.57
Antisocial	-0.36	0.00	0.53	0.33	0.03	0.20
Borderline	0.45	0.25	0.25	0.44	0.25	0.35
Histrionic	0.26	-0.04	0.36	0.36	0.22	0.21
Narcissistic	-0.11	-0.01	0.67	0.27	0.12	0.30
Avoidant	0.50	0.33	-0.11	0.09	0.21	0.03
Dependent	0.47	0.16	-0.01	0.30	0.05	0.22
Obsessive-Compulsive	0.26	0.09	0.17	0.04	0.66	0.26

Note. *n* = 142; all coefficients above 0.17 are significant at the 0.05 level, and coefficients above 0.21 are significant at the 0.001 level.

The Modified Personality Inventory for DSM-5 and ICD-11 – Brief Form Plus (PID5BF+ M)

The PID5BF+ M is short form of the Personality Inventory for DSM-5 (PID-5), augmented with a scoring algorithm to assess the ICD-11 personality trait domain Anankastia. The PID-5 is the official rating scale of the American Psychiatric Association for the assessment of maladaptive personality traits according to criterion B of the alternative model for personality disorders in section III of the DSM-5. Criterion B is an empirically derived and hierarchical model of problematic personality expressions, which is compatible with 4 of the 5 maladaptive trait domains in the ICD-11. The PID5BF+ M is therefore suitable to assess maladaptive personality traits both according to DSM-5 and ICD-11.



The assessment model comprises 18 trait facets, each consisting of 2 items. Specific trait facets can be combined to yield indices of the six broader trait domains according to the scheme above using the PID-5 items stated in the table below. The scores on the items within each trait facet should be summed, no item needs to be reverse scored. The average domain scores are calculated by averaging the 3 facet scores contributing to a specific domain. Higher average scores indicate greater dysfunction in a specific personality trait facet or domain.

PID5BF+ M SCORING ALGORITHM	Personality Trait Facet	PID5BF+ M item number	PID-5 item number	Sum Score Trait Facet	Average Score Trait Domain	Trait Domain
	Emotional Lability	1, 19	62, 122			Negative Affectivity
	Anxiety	7, 25	109, 110			
	Separation Insecurity	13, 31	50, 64			
	Withdrawal	4, 22	82, 136			Detachment
	Anhedonia	10, 28	23, 189			
	Intimacy Avoidance	16, 34	89, 108			
	Manipulativeness	2, 20	162, 219			Antagonism
	Deceitfulness	8, 26	126, 218			
	Grandiosity	14, 32	187, 197			
	Irresponsibility	3, 21	129, 160			Disinhibition
	Impulsivity	9, 27	4, 17			
	Distractibility	15, 33	6, 132			
	Perfectionism	6, 18	123, 176			Anankastia
	Rigidity	12, 24	140, 220			
	Orderliness	30, 36	34, 115			
	Unusual Beliefs & Experiences	5, 23	194, 209			Psychoticism
	Eccentricity	11, 29	25, 185			
	Perceptual Dysregulation	17, 35	44, 77			

The PID5BF+ was developed using ant colony optimization algorithms, validity of the model and of the assessment could be confirmed in large German and English speaking samples[1]. The PID5BF+ M differs only in the definition of the Anankastia domain, validity of this modified version could be ascertained in samples of 15 different countries[2].

[1] Kerber A., Schultze M., Müller S., Wright A. G. C., Spitzer C., Krueger R. F., Knaevelsrud, C., Zimmermann, J. Development of a Short and Reliable Measure for DSM-5 and ICD-11 Maladaptive Personality Traits Using Ant Colony Optimization Algorithms. 2019. DOI: 10.31234/osf.io/rsw54

[2] Bach, B., Kerber, A., Aluja, A., Bastiaens, T., Keeley, J., Claes, L., Fossati, A., Gutierrez, F., Oliveira, S. E. S., Pires, R., Riegel, K. D., Rolland, J., Roskam, I., Sellbom, M., Somma., A., Spanemberg, L., Strus, W., Thimm, J., Wright, A.G.C., Zimmermann, J. International Assessment of DSM-5 and ICD-11 Personality Disorder Traits: Toward a Common Nosology in DSM-5.1. 2019.

APPENDIX 1

Modified PID5BF+ scale characteristics for Denmark

	Patients (n = 584)		
	ρ	M	SD
Emotional lability	0.74	3.74	1.81
Anxiousness	0.89	4.23	1.72
Separation Insecurity	0.83	2.45	1.83
Withdrawal	0.75	2.96	1.58
Anhedonia	0.64	2.57	1.62
Intimacy Avoidance	0.67	1.87	1.77
Manipulativeness	0.85	1.13	1.58
Deceitfulness	0.70	1.14	1.38
Grandiosity	0.61	0.84	1.20
Irresponsibility	0.58	1.40	1.56
Impulsivity	0.79	2.35	1.76
Distractibility	0.82	3.74	1.71
Perfectionism	0.85	2.77	1.87
Rigidity	0.85	3.81	1.74
Orderliness	0.73	2.30	1.78
Unusual Beliefs	0.72	1.77	1.73
Eccentricity	0.72	2.18	1.74
Perceptual Dysreg.	0.76	0.85	1.29
		M	SD
Negative affectivity	-	3.49	1.35
Detachment	-	2.47	1.26
Antagonism	-	1.04	1.16
Disinhibition	-	2.50	1.27
Anankastia	-	2.96	1.50
Psychoticism	-	1.60	1.26

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 2

Modified PID5BF+ scale characteristics for Germany (Kerber et al., 2019)

		Patients (n = 684)		Community (n = 587)	
	ρ	M	SD	M	SD
Emotional lability	0.86	3.22	1.80	2.75	1.84
Anxiousness	0.94	3.79	1.79	2.58	1.91
Separation Insecurity	0.80	2.71	1.76	1.84	1.54
Withdrawal	0.84	2.41	1.50	1.21	1.42
Anhedonia	0.84	2.81	1.66	1.28	1.42
Intimacy Avoidance	0.72	2.17	1.66	1.11	1.40
Manipulativeness	0.79	0.76	1.16	0.86	1.14
Deceitfulness	0.74	1.30	1.39	1.72	1.42
Grandiosity	0.71	0.88	1.11	0.98	1.15
Irresponsibility	0.63	1.30	1.37	1.03	1.25
Impulsivity	0.75	2.40	1.61	1.78	1.38
Distractibility	0.75	3.30	1.57	2.44	1.47
Perfectionism	0.85	2.43	1.75	2.22	1.74
Rigidity	0.72	2.30	1.57	2.11	1.53
Orderliness	0.69	1.65	1.53	1.73	1.59
Unusual Beliefs	0.81	1.86	1.70	1.57	1.61
Eccentricity	0.81	1.91	1.59	1.58	1.66
Perceptual Dysreg.	0.86	1.12	1.46	1.13	1.45
		M	SD	M	SD
Negative affectivity	-	3.24	1.41	2.39	1.44
Detachment	-	2.47	1.24	1.20	1.13
Antagonism	-	0.98	1.00	1.19	0.97
Disinhibition	-	2.33	1.13	1.75	1.07
Anankastia	-	2.13	1.37	2.02	1.38
Psychoticism	-	1.63	1.30	1.42	1.29

Note. ρ = polychoric correlation coefficient; M = mean; SD = standard deviation.

APPENDIX 3

Modified PID5BF+ scale characteristics for U.S. Sample (Anderson et al. 2013)

		U. S. Students (n = 605)	
	ρ	M	SD
Emotional lability	0.74	1.78	1.61
Anxiousness	0.95	2.30	2.01
Separation Insecurity	0.61	1.66	1.49
Withdrawal	0.74	0.89	1.18
Anhedonia	0.68	1.08	1.28
Intimacy Avoidance	0.66	0.90	1.19
Manipulativeness	0.78	1.22	1.47
Deceitfulness	0.79	2.16	1.67
Grandiosity	0.63	1.14	1.29
Irresponsibility	0.64	0.94	1.20
Impulsivity	0.76	1.53	1.46
Distractibility	0.69	3.13	1.62
Perfectionism	0.77	2.06	1.64
Rigidity	0.65	2.54	1.53
Orderliness	0.78	1.80	1.63
Unusual Beliefs	0.69	1.54	1.57
Eccentricity	0.82	1.64	1.63
Perceptual Dysreg.	0.79	0.82	1.19
		M	SD
Negative affectivity	-	1.92	1.33
Detachment	-	0.96	0.92
Antagonism	-	1.51	1.21
Disinhibition	-	1.86	1.07
Anankastia	-	2.13	1.37
Psychoticism	-	1.33	1.16

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 4

Six-Factor Modified PID5BF+ Loading Pattern for Brazilian mixed sample with inter-domain correlations

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.66**	0.04	-0.05	0.09	0.11	0.05
Anxiousness	**0.35**	0.17	-0.02	0.18	0.39	-0.15
Separation Insecurity	**0.58**	0.05	0.08	0.07	0.00	0.06
Withdrawal	-0.01	**0.77**	0.00	0.03	0.03	0.09
Anhedonia	0.13	**0.59**	0.06	0.13	-0.03	0.02
Intimacy Avoidance	-0.13	**0.35**	0.07	0.10	0.07	0.16
Manipulativeness	-0.08	0.04	**0.74**	0.07	-0.01	0.08
Deceitfulness	0.06	0.02	**0.76**	0.08	0.05	0.03
Grandiosity	0.15	0.12	**0.39**	0.00	0.13	0.17
Irresponsibility	0.13	0.04	0.18	**0.29**	-0.21	0.17
Impulsivity	0.38	0.07	0.13	**0.25**	-0.11	0.13
Distractibility	-0.04	0.00	0.00	**0.85**	0.01	-0.01
Perfectionism	0.15	0.02	0.04	0.00	**0.68**	0.09
Rigidity	0.02	0.14	0.11	-0.04	**0.68**	0.08
Orderliness	0.04	0.05	0.02	0.01	**0.66**	0.10
Unusual Beliefs	0.10	0.06	0.11	0.02	0.09	**0.61**
Eccentricity	-0.04	0.16	0.03	0.15	0.04	**0.68**
Perceptual Dysreg.	0.11	0.05	0.10	0.14	0.02	**0.42**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.23**	-				
Antagonism	**0.19**	**0.24**	-			
Disinhibition	**0.36**	**0.32**	**0.28**	-		
Anankastia	**0.27**	**0.26**	**0.13**	0.00	-	
Psychoticism	**0.20**	**0.38**	**0.39**	**0.19**	**0.32**	-

Note. *N* = 1,281; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 4

The Modified PID5BF+ scales characteristics for Brazilian mixed sample

		Patients (n = 103)		Community (n = 1,178)	
	ρ	M	SD	M	SD
Emotional lability	0.69	3.92	1.78	2.44	1.81
Anxiousness	0.93	4.43	1.75	3.42	1.98
Separation Insecurity	0.77	2.89	1.89	1.57	1.62
Withdrawal	0.82	2.17	1.88	1.35	1.49
Anhedonia	0.82	2.61	1.90	1.56	1.64
Intimacy Avoidance	0.84	1.39	1.90	0.82	1.37
Manipulativeness	0.83	0.51	1.10	0.78	1.29
Deceitfulness	0.73	0.96	1.31	1.14	1.43
Grandiosity	0.74	1.34	1.54	0.86	1.28
Irresponsibility	0.62	1.31	1.59	1.04	1.33
Impulsivity	0.86	2.60	1.98	1.38	1.55
Distractibility	0.74	3.04	1.74	2.60	1.73
Perfectionism	0.82	2.80	2.23	1.96	1.73
Rigidity	0.73	3.19	1.80	2.51	1.71
Orderliness	0.68	2.22	1.88	1.68	1.62
Unusual Beliefs	0.81	2.04	1.97	1.22	1.56
Eccentricity	0.88	1.83	1.93	1.04	1.52
Perceptual Dysreg.	0.77	1.08	1.57	0.52	1.03
		M	SD	M	SD
Negative affectivity	-	3.75	1.32	2.48	1.42
Detachment	-	2.06	1.43	1.24	1.18
Antagonism	-	0.94	1.04	0.92	1.10
Disinhibition	-	2.32	1.35	1.67	1.17
Anankastia	-	2.74	1.66	2.05	1.43
Psychoticism	-	1.65	1.48	0.92	1.13

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 5

Six-Factor Loading Pattern for the Modified PID5BF+ in Czech mixed sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.39**	-0.02	-0.05	0.35	0.13	0.16
Anxiousness	**0.88**	0.12	0.04	-0.04	0.02	0.06
Separation Insecurity	**0.48**	0.01	0.07	0.26	0.08	-0.05
Withdrawal	0.11	**0.59**	0.06	-0.02	0.10	0.04
Anhedonia	0.24	**0.58**	0.03	0.20	-0.01	-0.08
Intimacy Avoidance	-0.08	**0.65**	0.03	-0.04	0.07	0.10
Manipulativeness	0.01	0.05	**0.87**	-0.03	-0.03	0.06
Deceitfulness	0.04	0.02	**0.61**	0.16	0.10	0.01
Grandiosity	0.04	0.01	**0.43**	0.11	0.19	0.15
Irresponsibility	-0.04	0.07	0.19	**0.46**	-0.09	0.34
Impulsivity	0.02	0.06	0.06	**0.74**	0.06	0.04
Distractibility	0.30	0.17	-0.04	**0.35**	0.00	0.29
Perfectionism	-0.05	0.05	0.03	0.09	**0.85**	-0.02
Rigidity	0.11	0.13	0.09	-0.16	**0.43**	0.10
Orderliness	0.17	0.03	-0.01	-0.06	**0.58**	0.11
Unusual Beliefs	0.05	0.08	0.18	0.03	0.04	**0.58**
Eccentricity	0.08	0.03	0.07	0.13	0.11	**0.65**
Perceptual Dysreg.	0.11	0.09	0.07	0.07	0.05	**0.44**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.35**	-				
Antagonism	**0.13**	**0.21**	-			
Disinhibition	**0.38**	**0.21**	**0.26**	-		
Anankastia	**0.27**	**0.25**	**0.21**	**0.10**	-	
Psychoticism	**0.31**	**0.26**	**0.36**	**0.41**	**0.25**	-

Note. *N* = 466; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 5

Modified PID5BF+ scales characteristics for Czech mixed sample

		Patients (n = 125)		Community (n = 341)	
	ρ	M	SD	M	SD
Emotional lability	0.81	3.06	1.90	1.55	1.54
Anxiousness	0.95	3.72	1.97	1.16	1.52
Separation Insecurity	0.81	2.70	1.81	1.16	1.43
Withdrawal	0.78	2.62	1.78	1.39	1.40
Anhedonia	0.75	2.75	1.60	1.08	1.31
Intimacy Avoidance	0.70	1.55	1.70	0.78	1.15
Manipulativeness	0.82	0.94	1.35	0.64	1.11
Deceitfulness	0.80	1.88	1.76	1.45	1.59
Grandiosity	0.73	1.03	1.48	0.80	1.19
Irresponsibility	0.71	1.54	1.65	0.91	1.21
Impulsivity	0.74	2.62	1.82	1.60	1.46
Distractibility	0.72	3.05	1.71	1.59	1.54
Perfectionism	0.80	2.09	1.84	1.78	1.58
Rigidity	0.70	3.20	1.68	2.78	1.57
Orderliness	0.75	1.48	1.80	1.05	1.35
Unusual Beliefs	0.80	2.04	1.93	1.14	1.54
Eccentricity	0.82	2.11	1.86	1.30	1.55
Perceptual Dysreg.	0.79	0.90	1.33	0.56	1.01
		M	SD	M	SD
Negative affectivity	-	3.17	1.48	1.29	1.19
Detachment	-	2.30	1.30	1.08	1.00
Antagonism	-	1.32	1.32	0.97	1.08
Disinhibition	-	2.40	1.39	1.36	1.15
Anankastia	-	2.28	1.48	1.87	1.18
Psychoticism	-	1.71	1.43	1.00	1.12

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 6

Six-Factor Loading Pattern for the Modified PID5BF+ in Dutch-speaking (Belgium) mixed sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.51**	-0.08	-0.08	0.25	0.14	0.09
Anxiousness	**0.82**	0.12	-0.02	0.02	0.05	0.04
Separation Insecurity	**0.46**	0.00	0.08	0.17	0.13	0.09
Withdrawal	0.04	**0.78**	0.03	0.01	0.09	0.05
Anhedonia	0.26	**0.55**	0.07	0.04	-0.10	0.10
Intimacy Avoidance	-0.02	**0.54**	-0.03	0.09	0.11	0.05
Manipulativeness	-0.07	-0.01	**0.74**	0.08	0.02	0.07
Deceitfulness	0.03	0.05	**0.74**	0.12	0.04	0.02
Grandiosity	0.04	0.07	**0.46**	-0.07	0.09	0.22
Irresponsibility	0.06	0.12	0.20	**0.47**	-0.13	0.05
Impulsivity	0.07	-0.03	0.06	**0.70**	0.03	0.08
Distractibility	0.20	0.18	0.04	**0.47**	0.01	0.06
Perfectionism	0.05	0.05	-0.06	0.07	**0.77**	0.00
Rigidity	0.09	0.05	0.14	-0.12	**0.68**	0.05
Orderliness	0.09	0.01	0.09	0.07	**0.48**	0.14
Unusual Beliefs	0.04	-0.01	-0.01	0.00	0.01	**0.92**
Eccentricity	0.03	0.20	0.18	0.16	0.04	**0.43**
Perceptual Dysreg.	-0.04	0.10	0.06	0.17	0.07	**0.35**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.29**	-				
Antagonism	0.05	0.20	-			
Disinhibition	**0.41**	**0.25**	**0.29**	-		
Anankastia	**0.29**	**0.15**	**0.16**	0.07	-	
Psychoticism	**0.26**	**0.30**	**0.33**	**0.34**	**0.22**	-

Note. *N* = 712; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 6

Modified PID5BF+ scales characteristics for Dutch-speaking (Belgium) mixed sample

		Patients (n = 234)		Community (n = 478)	
	ρ	M	SD	M	SD
Emotional lability	0.81	3.34	1.86	2.03	1.53
Anxiousness	0.93	3.77	1.85	1.98	1.68
Separation Insecurity	0.73	2.54	1.71	1.27	1.25
Withdrawal	0.79	2.39	1.51	0.96	1.23
Anhedonia	0.82	2.74	1.78	0.99	1.10
Intimacy Avoidance	0.71	1.58	1.59	0.73	1.12
Manipulativeness	0.84	1.66	1.52	1.26	1.35
Deceitfulness	0.74	2.11	1.53	1.61	1.39
Grandiosity	0.74	1.12	1.30	0.67	0.98
Irresponsibility	0.62	1.73	1.57	0.92	1.11
Impulsivity	0.77	2.52	1.77	1.58	1.28
Distractibility	0.78	3.49	1.62	1.89	1.41
Perfectionism	0.85	2.71	1.89	2.01	1.59
Rigidity	0.77	3.06	1.53	2.61	1.56
Orderliness	0.64	1.65	1.55	1.19	1.24
Unusual Beliefs	0.80	1.99	1.85	0.94	1.32
Eccentricity	0.84	2.07	1.67	0.87	1.29
Perceptual Dysreg.	0.73	0.68	1.12	0.38	0.74
		M	SD	M	SD
Negative affectivity	-	3.21	1.43	1.76	1.20
Detachment	-	2.24	1.27	0.89	0.89
Antagonism	-	1.63	1.20	1.18	1.02
Disinhibition	-	2.59	1.32	1.46	0.97
Anankastia	-	2.47	1.38	1.93	1.18
Psychoticism	-	1.58	1.22	0.73	0.90

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 7

Six-Factor Loading Pattern for the Modified PID5BF+ in French-speaking (Belgium) community sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.68**	0.01	-0.03	0.10	-0.03	0.16
Anxiousness	**0.62**	0.17	-0.05	0.02	0.15	-0.02
Separation Insecurity	**0.49**	-0.12	0.05	0.17	0.11	-0.07
Withdrawal	0.06	**0.75**	0.02	-0.02	0.00	0.08
Anhedonia	0.03	**0.51**	0.04	0.17	0.04	0.00
Intimacy Avoidance	-0.08	**0.41**	0.08	0.11	0.07	0.08
Manipulativeness	-0.07	0.05	**0.73**	0.02	0.01	0.07
Deceitfulness	0.05	0.02	**0.68**	0.09	0.01	0.05
Grandiosity	-0.06	0.11	**0.41**	0.01	0.17	0.15
Irresponsibility	0.02	0.10	0.19	**0.35**	-0.17	0.06
Impulsivity	0.15	-0.08	0.16	**0.43**	-0.06	0.05
Distractibility	0.08	0.07	-0.06	**0.61**	0.00	0.03
Perfectionism	0.09	0.02	0.03	0.02	**0.78**	0.03
Rigidity	0.09	0.09	0.08	-0.08	**0.65**	0.05
Orderliness	0.09	0.05	0.01	-0.08	**0.66**	0.04
Unusual Beliefs	0.05	0.03	0.05	-0.02	0.00	**0.82**
Eccentricity	0.01	0.11	0.07	0.26	0.05	**0.50**
Perceptual Dysreg.	0.04	0.04	0.05	0.21	0.07	**0.38**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.10**	-				
Antagonism	-0.02	**0.19**	-			
Disinhibition	**0.32**	**0.21**	**0.27**	-		
Anankastia	**0.28**	**0.19**	**0.14**	**-0.11**	-	
Psychoticism	**0.15**	**0.28**	**0.31**	**0.33**	**0.15**	-

Note. *N* = 1,529; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 7

Six-Factor Loading Pattern for French-speaking (Switzerland) community sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.35**	-0.03	-0.11	0.39	0.12	0.13
Anxiousness	**0.42**	0.17	-0.17	0.26	0.22	-0.02
Separation Insecurity	**0.73**	-0.10	0.07	0.03	-0.01	0.01
Withdrawal	-0.09	**0.72**	0.03	0.07	0.11	0.02
Anhedonia	0.14	**0.51**	0.06	0.10	-0.05	0.01
Intimacy Avoidance	-0.02	**0.40**	-0.02	-0.02	0.02	0.17
Manipulativeness	-0.05	0.04	**0.79**	0.03	0.05	0.04
Deceitfulness	0.15	0.01	**0.63**	0.05	0.06	0.04
Grandiosity	0.28	0.25	**0.35**	-0.22	0.04	0.15
Irresponsibility	0.09	0.13	0.25	**0.20**	-0.33	0.05
Impulsivity	0.06	-0.14	0.26	**0.35**	0.02	0.18
Distractibility	0.09	0.12	0.03	**0.64**	-0.11	0.03
Perfectionism	0.14	0.02	0.06	-0.06	**0.69**	0.08
Rigidity	0.07	0.12	0.10	-0.03	**0.68**	-0.01
Orderliness	0.07	0.09	-0.02	0.06	**0.60**	0.02
Unusual Beliefs	0.05	-0.04	0.00	-0.03	0.00	**0.77**
Eccentricity	-0.10	0.08	0.16	0.30	0.02	**0.45**
Perceptual Dysreg.	0.04	0.14	-0.04	0.12	0.02	**0.48**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.12**	-				
Antagonism	**0.14**	**0.16**	-			
Disinhibition	**0.32**	**0.18**	0.10	-		
Anankastia	**0.28**	**0.19**	0.04	-0.04	-	
Psychoticism	**0.16**	**0.21**	**0.24**	0.09	**0.33**	-

Note. *N* = 494; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 7

Six-Factor Loading Pattern for the Modified PID5BF+ in French community sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.61**	-0.01	-0.01	0.18	-0.02	0.04
Anxiousness	**0.72**	0.12	-0.06	-0.11	0.06	0.06
Separation Insecurity	**0.55**	-0.12	0.05	0.12	0.13	-0.05
Withdrawal	0.05	**0.62**	0.02	-0.03	0.06	0.08
Anhedonia	0.00	**0.58**	0.04	0.13	0.02	-0.02
Intimacy Avoidance	0.00	**0.31**	0.10	0.08	-0.05	0.03
Manipulativeness	-0.04	0.15	**0.72**	0.03	0.04	-0.05
Deceitfulness	0.02	-0.04	**0.67**	0.03	0.03	0.08
Grandiosity	-0.13	0.08	**0.37**	-0.01	0.09	0.25
Irresponsibility	0.02	-0.08	0.35	**0.21**	-0.16	0.26
Impulsivity	-0.04	0.00	-0.07	**0.71**	0.04	-0.06
Distractibility	0.18	0.10	-0.02	**0.24**	-0.12	0.37
Perfectionism	0.14	0.05	0.12	0.01	**0.70**	0.00
Rigidity	-0.02	-0.01	0.09	0.07	**0.74**	-0.04
Orderliness	0.07	0.05	-0.11	-0.16	**0.74**	0.08
Unusual Beliefs	-0.02	0.16	0.14	0.14	0.04	**0.39**
Eccentricity	0.04	0.31	0.05	0.05	-0.02	**0.51**
Perceptual Dysreg.	0.02	-0.07	-0.04	0.06	0.10	**0.56**
Latent domain correlations						
Negative affectivity	-					
Detachment	0.07	-				
Antagonism	-0.07	**0.19**	-			
Disinhibition	0.15	0.13	**0.19**	-		
Anankastia	**0.18**	0.09	0.08	-0.10	-	
Psychoticism	**0.13**	**0.31**	**0.26**	0.02	**0.27**	-

Note. *N* = 371; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 7

Modified PID5BF+ scale characteristics for three French-speaking community samples

	France (n = 371)			Belgium (n = 1,529)			Switzerland (n = 494)		
	ρ	M	SD	ρ	M	SD	ρ	M	SD
Emotional lability	0.67	2.48	1.64	0.82	2.65	1.81	0.82	2.19	1.76
Anxiousness	0.88	2.64	1.80	0.91	2.79	1.82	0.89	2.17	1.78
Separation Insecurity	0.76	2.36	1.73	0.77	2.30	1.64	0.68	1.75	1.51
Withdrawal	0.72	1.31	1.27	0.75	1.47	1.37	0.70	1.21	1.25
Anhedonia	0.53	1.14	1.18	0.67	1.14	1.29	0.61	0.89	1.13
Intimacy Avoidance	0.75	1.08	1.38	0.75	1.17	1.43	0.71	1.04	1.36
Manipulativeness	0.77	1.00	1.33	0.84	1.31	1.50	0.81	1.16	1.40
Deceitfulness	0.61	1.63	1.35	0.67	1.96	1.44	0.68	1.83	1.41
Grandiosity	0.38	0.43	0.76	0.72	0.83	1.11	0.73	0.79	1.12
Irresponsibility	0.54	0.99	1.16	0.59	1.32	1.40	0.60	1.27	1.40
Impulsivity	0.67	2.18	1.42	0.69	2.16	1.51	0.71	1.87	1.45
Distractibility	0.68	3.14	1.55	0.68	2.83	1.58	0.68	2.45	1.58
Perfectionism	0.78	1.70	1.55	0.86	2.10	1.74	0.80	1.77	1.62
Rigidity	0.71	2.26	1.50	0.72	2.66	1.57	0.70	2.63	1.55
Orderliness	0.79	1.60	1.68	0.73	1.73	1.60	0.69	1.50	1.53
Unusual Beliefs	0.61	0.99	1.24	0.79	1.19	1.54	0.71	1.14	1.46
Eccentricity	0.83	1.27	1.54	0.82	1.40	1.59	0.78	1.05	1.37
Perceptual Dysreg.	0.72	1.03	1.33	0.74	1.06	1.37	0.71	0.72	1.15
		M	SD		M	SD		M	SD
Negative affectivity	-	2.49	1.34	-	2.58	1.38	-	2.04	1.30
Detachment	-	1.18	0.92	-	1.26	1.04	-	1.05	0.92
Antagonism	-	1.02	0.91	-	1.37	1.08	-	1.26	1.03
Disinhibition	-	2.10	0.96	-	2.10	1.09	-	1.86	1.06
Anankastia	-	1.85	1.32	-	2.16	1.38	-	1.97	1.28
Psychoticism	-	1.10	1.03	-	1.22	1.20	-	0.97	1.03

Note. ρ = polychoric correlation coefficient; M = mean; SD = standard deviation.

APPENDIX 8

Six-Factor Loading Pattern for the Modified PID5BF+ in an Italian Community Sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.68**	-0.04	0.01	0.08	0.01	0.15
Anxiousness	**0.62**	0.16	-0.03	0.05	0.12	-0.04
Separation Insecurity	**0.42**	0.06	0.12	0.17	0.06	0.01
Withdrawal	0.07	**0.63**	0.03	-0.03	0.02	0.15
Anhedonia	0.10	**0.59**	0.12	0.11	0.00	-0.02
Intimacy Avoidance	-0.05	**0.47**	0.01	0.09	0.11	0.03
Manipulativeness	-0.04	0.06	**0.67**	0.04	-0.07	0.15
Deceitfulness	0.06	0.04	**0.68**	0.09	0.08	0.04
Grandiosity	0.06	0.11	**0.42**	0.03	0.21	0.10
Irresponsibility	0.02	0.19	0.21	**0.36**	-0.09	0.13
Impulsivity	0.07	-0.11	0.15	**0.47**	0.06	0.14
Distractibility	0.11	0.05	-0.04	**0.62**	-0.02	0.08
Perfectionism	0.08	0.07	0.02	0.04	**0.75**	0.09
Rigidity	0.03	-0.04	0.05	-0.23	**0.58**	0.02
Orderliness	0.13	0.04	0.03	0.10	**0.56**	0.01
Unusual Beliefs	0.13	0.01	0.10	0.05	0.05	**0.61**
Eccentricity	-0.02	0.07	0.10	0.15	0.02	**0.61**
Perceptual Dysreg.	0.07	0.13	-0.01	0.15	0.08	**0.40**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.24**	-				
Antagonism	**0.15**	**0.26**	-			
Disinhibition	**0.37**	**0.26**	**0.33**	-		
Anankastia	**0.32**	**0.16**	**0.17**	0.01	-	
Psychoticism	**0.25**	**0.27**	**0.40**	**0.19**	**0.45**	-

Note. *N* = 1,965; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 8

The Modified PID5BF+ scale score characteristics for an Italian community sample

	Community (n = 1,965)		
	ρ	M	SD
Emotional lability	0.71	2.05	1.58
Anxiousness	0.90	2.22	1.75
Separation Insecurity	0.74	1.25	1.39
Withdrawal	0.74	0.87	1.18
Anhedonia	0.74	1.12	1.30
Intimacy Avoidance	0.60	1.15	1.33
Manipulativeness	0.85	0.72	1.18
Deceitfulness	0.68	1.28	1.37
Grandiosity	0.65	1.27	1.39
Irresponsibility	0.64	0.86	1.09
Impulsivity	0.78	1.63	1.52
Distractibility	0.72	2.13	1.56
Perfectionism	0.81	1.75	1.61
Rigidity	0.65	3.64	1.43
Orderliness	0.59	1.74	1.48
Unusual Beliefs	0.79	1.33	1.53
Eccentricity	0.84	1.27	1.51
Perceptual Dysreg.	0.72	0.91	1.25
		M	SD
Negative affectivity	-	1.84	1.25
Detachment	-	1.05	0.98
Antagonism	-	1.09	1.06
Disinhibition	-	1.54	1.07
Anankastia	-	2.38	1.20
Psychoticism	-	1.17	1.16

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 9

Six-Factor Loading Pattern for the Modified PID5BF+ in a Norwegian student sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.66**	-0.13	-0.02	0.08	0.07	0.04
Anxiousness	**0.69**	0.15	-0.01	0.02	0.10	0.03
Separation Insecurity	**0.55**	0.10	0.01	0.13	0.01	-0.04
Withdrawal	0.04	**0.64**	0.07	-0.10	0.11	0.15
Anhedonia	0.04	**0.72**	0.00	0.22	-0.02	-0.03
Intimacy Avoidance	0.00	**0.38**	0.13	-0.07	0.04	0.23
Manipulativeness	-0.02	0.03	**0.82**	0.04	-0.03	0.05
Deceitfulness	0.00	0.03	**0.62**	0.11	0.10	0.05
Grandiosity	0.00	0.10	**0.42**	-0.05	0.11	0.05
Irresponsibility	0.04	0.04	0.16	**0.35**	-0.11	0.17
Impulsivity	0.05	-0.01	0.08	**0.64**	-0.01	0.04
Distractibility	0.09	0.12	-0.03	**0.53**	0.09	0.11
Perfectionism	0.13	0.10	0.05	0.03	**0.59**	0.04
Rigidity	0.05	0.04	0.05	0.02	**0.63**	0.10
Orderliness	0.08	0.01	0.02	0.01	**0.70**	0.04
Unusual Beliefs	0.07	-0.02	0.10	0.11	0.03	**0.66**
Eccentricity	-0.02	0.12	0.02	0.07	0.08	**0.75**
Perceptual Dysreg.	0.03	0.11	0.10	0.21	0.06	**0.34**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.18**	-				
Antagonism	0.02	**0.23**	-			
Disinhibition	**0.29**	**0.20**	**0.22**	-		
Anankastia	**0.30**	**0.23**	**0.18**	0.07	-	
Psychoticism	**0.12**	**0.33**	**0.32**	**0.27**	**0.35**	-

Note. *N* = 495; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 9

The Modified PID5BF+ scale score characteristics for a Norwegian student sample

		Students (n = 495)	
	ρ	M	SD
Emotional lability	0.82	2.32	1.72
Anxiousness	0.91	2.28	1.77
Separation Insecurity	0.69	1.59	1.36
Withdrawal	0.80	1.60	1.57
Anhedonia	0.79	1.21	1.40
Intimacy Avoidance	0.79	1.17	1.46
Manipulativeness	0.76	1.15	1.28
Deceitfulness	0.74	2.03	1.48
Grandiosity	0.75	0.65	1.03
Irresponsibility	0.61	0.91	1.20
Impulsivity	0.71	1.67	1.28
Distractibility	0.74	2.43	1.53
Perfectionism	0.87	1.40	1.48
Rigidity	0.78	2.26	1.55
Orderliness	0.64	1.79	1.50
Unusual Beliefs	0.78	1.15	1.39
Eccentricity	0.86	1.34	1.54
Perceptual Dysreg.	0.72	0.74	1.13
		M	SD
Negative affectivity	-	2.06	1.30
Detachment	-	1.33	1.16
Antagonism	-	1.28	1.01
Disinhibition	-	1.67	1.01
Anankastia	-	1.81	1.24
Psychoticism	-	1.08	1.12

Note. ρ = polychoric correlation coefficient; M = mean; SD = standard deviation.

APPENDIX 10

Six-Factor Loading Pattern for the Modified PID5BF+ in a Polish mixed sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.83**	-0.05	0.07	0.03	-0.03	0.17
Anxiousness	**0.62**	0.28	-0.14	0.09	0.11	-0.10
Separation Insecurity	**0.37**	-0.12	0.05	0.25	0.20	-0.16
Withdrawal	0.08	**0.66**	0.03	-0.01	-0.02	0.16
Anhedonia	-0.13	**0.48**	0.03	0.15	0.08	-0.08
Intimacy Avoidance	0.03	**0.47**	0.06	0.05	0.06	0.01
Manipulativeness	0.00	0.05	**0.79**	0.01	-0.06	0.13
Deceitfulness	0.01	0.00	**0.58**	0.18	0.05	-0.07
Grandiosity	-0.01	-0.02	**0.44**	0.09	0.26	0.09
Irresponsibility	-0.06	0.04	0.10	**0.59**	-0.10	0.07
Impulsivity	0.18	0.02	0.16	**0.32**	-0.11	0.23
Distractibility	0.18	0.11	-0.04	**0.46**	-0.02	0.12
Perfectionism	0.11	0.04	0.07	0.03	**0.60**	0.10
Rigidity	-0.02	0.07	0.02	-0.03	**0.64**	0.06
Orderliness	0.08	0.04	-0.03	-0.06	**0.66**	0.07
Unusual Beliefs	0.10	-0.01	0.07	0.13	0.11	**0.51**
Eccentricity	0.03	0.13	0.09	0.07	0.04	**0.63**
Perceptual Dysreg.	0.02	-0.01	-0.01	0.27	0.13	**0.31**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.12**	-				
Antagonism	0.02	**0.07**	-			
Disinhibition	**0.32**	**0.20**	**0.32**	-		
Anankastia	**0.22**	**0.15**	**0.11**	0.04	-	
Psychoticism	**0.21**	**0.19**	**0.30**	**0.36**	**0.18**	-

Note. *N* = 1,088; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 10

The Modified PID5BF+ scale score characteristics for a Polish mixed sample

		Patients (n = 117)		Community (n = 971)	
	ρ	M	SD	M	SD
Emotional lability	0.75	3.96	1.78	2.65	1.66
Anxiousness	0.92	3.87	1.91	2.52	1.92
Separation Insecurity	0.62	3.16	1.89	2.43	1.54
Withdrawal	0.72	2.81	1.67	1.83	1.43
Anhedonia	0.35	1.78	1.54	1.44	1.20
Intimacy Avoidance	0.52	2.28	1.69	1.40	1.43
Manipulativeness	0.84	1.77	1.71	1.23	1.42
Deceitfulness	0.82	2.66	1.76	2.51	1.58
Grandiosity	0.64	1.63	1.73	1.57	1.36
Irresponsibility	0.52	2.40	1.94	1.59	1.47
Impulsivity	0.74	3.08	1.79	1.87	1.50
Distractibility	0.66	3.43	1.74	2.48	1.49
Perfectionism	0.77	2.59	1.86	1.94	1.51
Rigidity	0.72	3.09	1.74	2.92	1.56
Orderliness	0.68	1.60	1.69	1.71	1.55
Unusual Beliefs	0.73	2.12	2.00	1.71	1.56
Eccentricity	0.77	2.48	1.86	1.68	1.57
Perceptual Dysreg.	0.75	0.87	1.26	0.76	1.15
		M	SD	M	SD
Negative affectivity	-	3.66	1.53	2.53	1.31
Detachment	-	2.29	1.22	1.56	0.99
Antagonism	-	2.02	1.39	1.77	1.15
Disinhibition	-	2.96	1.33	1.98	1.11
Anankastia	-	2.42	1.40	2.19	1.24
Psychoticism	-	1.81	1.37	1.38	1.11

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 11

Six-Factor Loading Pattern for PID5BF+ in a Portuguese community sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.49**	-0.03	-0.04	0.24	0.04	0.16
Anxiousness	**0.60**	0.18	-0.03	0.03	0.20	0.02
Separation Insecurity	**0.54**	-0.02	0.10	0.06	-0.01	-0.01
Withdrawal	-0.05	**0.67**	0.02	0.06	0.11	0.08
Anhedonia	0.23	**0.62**	0.09	0.03	-0.10	0.04
Intimacy Avoidance	-0.02	**0.44**	-0.02	0.06	0.05	0.09
Manipulativeness	-0.03	0.08	**0.55**	0.01	-0.03	0.11
Deceitfulness	0.03	0.00	**0.77**	0.07	0.04	0.05
Grandiosity	-0.03	0.02	**0.35**	0.06	0.19	0.14
Irresponsibility	0.02	0.11	0.20	**0.38**	-0.25	0.02
Impulsivity	0.04	-0.04	0.09	**0.57**	0.08	-0.01
Distractibility	0.12	0.14	0.02	**0.50**	-0.06	0.07
Perfectionism	0.18	-0.01	0.08	0.06	**0.62**	0.10
Rigidity	0.05	0.07	0.04	-0.05	**0.67**	0.02
Orderliness	0.14	0.06	0.05	-0.03	**0.57**	0.04
Unusual Beliefs	0.05	0.01	0.08	-0.05	-0.01	**0.79**
Eccentricity	-0.08	0.15	0.09	0.21	0.05	**0.50**
Perceptual Dysreg.	0.08	0.06	0.02	0.24	0.04	**0.37**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.22**	-				
Antagonism	**0.09**	**0.18**	-			
Disinhibition	**0.31**	**0.27**	**0.30**	-		
Anankastia	**0.31**	**0.11**	**0.14**	-0.03	-	
Psychoticism	**0.18**	**0.30**	**0.34**	**0.20**	**0.34**	-

Note. *N* = 1,185; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 11

The Modified PID5BF+ scale score characteristics for a Portuguese Community Sample

	Community (n = 1,185)		
	ρ	M	SD
Emotional lability	0.70	2.56	1.66
Anxiousness	0.90	2.95	1.86
Separation Insecurity	0.74	1.88	1.57
Withdrawal	0.76	1.10	1.30
Anhedonia	0.76	1.20	1.33
Intimacy Avoidance	0.70	0.91	1.31
Manipulativeness	0.83	0.58	1.05
Deceitfulness	0.64	1.31	1.29
Grandiosity	0.65	0.87	1.21
Irresponsibility	0.64	0.83	1.14
Impulsivity	0.74	1.80	1.41
Distractibility	0.68	2.57	1.56
Perfectionism	0.68	2.30	1.57
Rigidity	0.65	3.33	1.53
Orderliness	0.75	1.74	1.63
Unusual Beliefs	0.79	1.04	1.35
Eccentricity	0.83	1.08	1.38
Perceptual Dysreg.	0.71	0.71	1.08
		M	SD
Negative affectivity	-	2.46	1.32
Detachment	-	1.07	1.01
Antagonism	-	0.92	0.91
Disinhibition	-	1.73	1.03
Anankastia	-	2.45	1.28
Psychoticism	-	0.95	1.01

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.

APPENDIX 12

Six-Factor Loading Pattern for the Modified PID5BF+ in a Spanish Mixed Sample

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.45**	-0.11	-0.02	0.19	0.12	0.14
Anxiousness	**0.78**	0.17	0.00	-0.03	0.05	0.06
Separation Insecurity	**0.42**	-0.22	0.08	0.25	0.08	0.00
Withdrawal	0.07	**0.67**	0.02	0.02	0.07	0.12
Anhedonia	0.17	**0.50**	0.06	0.27	-0.04	-0.04
Intimacy Avoidance	0.01	**0.49**	0.08	-0.02	0.03	0.07
Manipulativeness	-0.08	0.09	**0.68**	0.06	-0.03	0.06
Deceitfulness	0.12	-0.06	**0.65**	0.10	0.03	0.03
Grandiosity	0.02	0.11	**0.44**	-0.09	0.17	0.17
Irresponsibility	0.08	0.11	0.17	**0.46**	-0.22	0.07
Impulsivity	0.16	0.01	0.17	**0.48**	0.02	0.10
Distractibility	0.11	0.10	0.05	**0.56**	-0.02	0.10
Perfectionism	0.03	-0.06	-0.03	0.04	**0.68**	0.07
Rigidity	0.15	0.08	0.11	-0.08	**0.62**	0.03
Orderliness	0.12	0.07	0.03	-0.05	**0.67**	0.04
Unusual Beliefs	0.08	0.01	0.04	-0.05	-0.01	**0.79**
Eccentricity	-0.01	0.18	0.09	0.29	0.08	**0.46**
Perceptual Dysreg.	0.01	0.02	0.05	0.14	0.06	**0.44**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.15**	-				
Antagonism	**0.18**	**0.22**	-			
Disinhibition	**0.41**	**0.19**	**0.33**	-		
Anankastia	**0.32**	0.08	**0.13**	**-0.10**	-	
Psychoticism	**0.26**	**0.26**	**0.31**	**0.21**	**0.33**	-

Note. *N* = 1,431; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 12

The Modified PID5BF+ scale score characteristics for a Spanish Mixed Sample

		Community (n = 1,011)		Patients (n = 420)	
	ρ	M	SD	M	SD
Emotional lability	0.61	2.90	1.46	3.80	1.79
Anxiousness	0.92	2.33	1.77	3.84	2.04
Separation Insecurity	0.70	1.77	1.32	2.28	1.74
Withdrawal	0.73	1.31	1.25	2.22	1.74
Anhedonia	0.77	0.94	1.16	2.35	1.81
Intimacy Avoidance	0.60	1.14	1.23	1.56	1.69
Manipulativeness	0.79	0.61	1.01	1.29	1.60
Deceitfulness	0.74	1.50	1.27	2.16	1.85
Grandiosity	0.70	0.93	1.15	1.12	1.45
Irresponsibility	0.68	1.10	1.17	1.64	1.63
Impulsivity	0.79	1.93	1.44	2.92	1.86
Distractibility	0.76	2.46	1.53	3.52	1.89
Perfectionism	0.58	2.56	1.31	2.38	1.92
Rigidity	0.74	2.58	1.47	3.12	1.81
Orderliness	0.74	1.83	1.55	2.08	1.93
Unusual Beliefs	0.78	1.38	1.48	1.94	1.92
Eccentricity	0.83	1.16	1.43	2.12	1.89
Perceptual Dysreg.	0.68	0.72	1.06	0.93	1.39
		M	SD	M	SD
Negative affectivity	-	2.33	1.15	3.30	1.47
Detachment	-	1.13	0.90	2.04	1.34
Antagonism	-	1.02	0.91	1.52	1.23
Disinhibition	-	1.83	1.07	2.69	1.41
Anankastia	-	2.32	1.16	2.53	1.60
Psychoticism	-	1.09	1.06	1.66	1.38

Note. ρ = polychoric correlation coefficient; M = mean; SD = standard deviation.

APPENDIX 13

Six-Factor Loading Pattern for the Modified PID5BF+ in a U.S. mixed sample (Keeley et al., 2014)

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychoticism
Emotional lability	**0.65**	0.05	0.01	0.13	0.03	0.04
Anxiousness	**0.62**	0.17	-0.03	-0.05	0.18	0.07
Separation Insecurity	**0.58**	-0.03	0.08	0.09	0.03	0.04
Withdrawal	0.04	**0.81**	0.00	0.03	0.01	0.09
Anhedonia	0.07	**0.53**	0.15	0.13	-0.01	0.08
Intimacy Avoidance	-0.10	**0.34**	0.02	0.42	0.08	-0.02
Manipulativeness	-0.07	0.08	**0.69**	0.13	-0.03	0.07
Deceitfulness	0.13	0.00	**0.62**	0.05	0.03	0.08
Grandiosity	0.00	0.10	**0.51**	0.16	0.15	0.01
Irresponsibility	0.11	0.13	0.16	**0.52**	-0.06	0.03
Impulsivity	0.07	-0.08	0.12	**0.39**	-0.05	0.25
Distractibility	0.30	-0.08	0.02	**0.16**	-0.01	0.33
Perfectionism	0.11	0.01	0.04	0.08	**0.78**	0.04
Rigidity	0.04	0.09	0.13	-0.13	**0.72**	0.07
Orderliness	0.07	0.04	-0.05	0.07	**0.76**	0.05
Unusual Beliefs	0.00	0.12	0.16	0.08	0.07	**0.55**
Eccentricity	0.02	0.11	0.00	0.05	0.03	**0.76**
Perceptual Dysreg.	0.03	0.11	0.06	0.37	0.08	**0.27**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.15**	**-**				
Antagonism	**0.13**	**0.25**	**-**			
Disinhibition	**0.25**	**0.38**	**0.45**	**-**		
Anankastia	**0.27**	**0.20**	**0.15**	**0.06**	**-**	
Psychoticism	**0.29**	**0.31**	**0.30**	**0.19**	**0.43**	**-**

Note. *N* = 1,024; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 13

The Modified PID5BF+ scale score characteristics for a U.S. mixed sample (Keeley et al., 2014)

		Patients (n = 80)		Students (n = 944)	
	ρ	M	SD	M	SD
Emotional lability	0.80	2,64	2,06	1,93	1,73
Anxiousness	0.94	2,83	2,16	2,60	2,07
Separation Insecurity	0.72	2,24	1,85	1,92	1,64
Withdrawal	0.77	2,62	1,80	1,34	1,40
Anhedonia	0.75	2,63	1,78	1,16	1,36
Intimacy Avoidance	0.75	2,38	1,85	1,05	1,37
Manipulativeness	0.79	2,11	1,85	1,18	1,43
Deceitfulness	0.74	2,29	1,89	1,93	1,56
Grandiosity	0.77	2,33	1,95	1,02	1,30
Irresponsibility	0.74	2,37	1,78	0,79	1,15
Impulsivity	0.76	2,83	1,82	1,65	1,42
Distractibility	0.75	3,03	1,72	3,01	1,67
Perfectionism	0.83	2,96	1,96	1,97	1,76
Rigidity	0.77	3,06	1,83	2,65	1,66
Orderliness	0.77	2,59	1,81	1,97	1,69
Unusual Beliefs	0.78	2,54	1,95	1,75	1,66
Eccentricity	0.78	2,49	2,00	1,94	1,69
Perceptual Dysreg.	0.77	2,00	1,87	0,98	1,27
		M	SD	M	SD
Negative affectivity	-	2,57	1,82	2,15	1,45
Detachment	-	2,53	1,62	1,19	1,08
Antagonism	-	2,29	1,78	1,37	1,14
Disinhibition	-	2,75	1,51	1,83	1,06
Anankastia	-	2,88	1,66	2,20	1,48
Psychoticism	-	2,36	1,75	1,56	1,25

Note. ρ = polychoric correlation coefficient; M = mean; SD = standard deviation.

APPENDIX 13

Six-Factor Loading Pattern for the Modified PID5BF+ in a U.S. Student sample (Wright et al., 2012)

	Negative Affectivity	Detachment	Antagonism	Disinhibition	Anankastia	Psychioticism
Emotional lability	**0.58**	-0.03	0.03	0.08	0.12	0.09
Anxiousness	**0.65**	0.23	-0.02	-0.04	0.15	0.01
Separation Insecurity	**0.55**	-0.01	0.05	0.17	0.05	0.00
Withdrawal	0.03	**0.81**	0.04	0.01	0.02	0.10
Anhedonia	0.14	**0.57**	0.05	0.19	-0.04	0.04
Intimacy Avoidance	-0.09	**0.40**	0.07	0.18	0.05	0.08
Manipulativeness	-0.15	0.08	**0.61**	0.16	0.09	0.08
Deceitfulness	0.11	0.01	**0.82**	0.00	-0.04	0.05
Grandiosity	-0.08	0.08	**0.40**	0.23	0.21	0.02
Irresponsibility	0.02	0.12	0.05	**0.69**	-0.02	0.01
Impulsivity	0.11	-0.11	0.18	**0.40**	-0.09	0.20
Distractibility	0.33	-0.03	0.08	**0.23**	-0.09	0.24
Perfectionism	0.07	0.05	0.01	0.10	**0.78**	0.02
Rigidity	0.10	0.04	0.15	-0.16	**0.67**	0.08
Orderliness	0.11	0.01	0.01	-0.02	**0.72**	0.06
Unusual Beliefs	-0.02	0.11	0.10	0.02	0.06	**0.68**
Eccentricity	0.08	0.05	0.03	0.07	0.00	**0.67**
Perceptual Dysreg.	-0.05	0.13	0.04	0.25	0.11	**0.41**
Latent domain correlations						
Negative affectivity	-					
Detachment	**0.14**	-				
Antagonism	**0.07**	**0.20**	-			
Disinhibition	**0.20**	**0.32**	**0.39**	-		
Anankastia	**0.25**	**0.18**	**0.20**	0.00	-	
Psychoticism	**0.19**	**0.29**	**0.32**	**0.40**	**0.17**	-

Note. *N* = 1,826; Expected primary loadings are boldfaced. The matrix at the bottom shows inter-domain correlations, where bolded coefficients are significant at the 0.05 level.

APPENDIX 13

The Modified PID5BF+ scale score characteristics for U.S. Students (Wright et al., 2012)

		Students (n = 1,826)	
	ρ	M	SD
Emotional lability	0.81	2.30	1.72
Anxiousness	0.93	2.63	1.90
Separation Insecurity	0.65	2.17	1.55
Withdrawal	0.77	1.32	1.39
Anhedonia	0.82	1.30	1.45
Intimacy Avoidance	0.74	1.22	1.41
Manipulativeness	0.81	1.57	1.52
Deceitfulness	0.79	2.40	1.54
Grandiosity	0.74	1.31	1.35
Irresponsibility	0.69	1.07	1.25
Impulsivity	0.77	1.87	1.46
Distractibility	0.73	3.04	1.55
Perfectionism	0.82	2.04	1.61
Rigidity	0.78	2.69	1.54
Orderliness	0.80	1.94	1.59
Unusual Beliefs	0.75	1.93	1.65
Eccentricity	0.80	2.15	1.68
Perceptual Dysreg.	0.83	1.05	1.37
		M	SD
Negative affectivity	-	2.37	1.38
Detachment	-	1.28	1.13
Antagonism	-	1.77	1.21
Disinhibition	-	2.01	1.10
Anankastia	-	2.22	1.36
Psychoticism	-	1.70	1.29

Note. ρ = polychoric correlation coefficient; α = alpha coefficient; M = mean; SD = standard deviation.